

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the captioned patent application:

Listing of Claims:

1-38. (Cancelled)

39. (New) An implantable component of a cochlear implant system comprising:

a housing configured to be implanted in a recipient, said housing having therein electronics configured to output one or more stimulation signals; and

a first electrode assembly having first and second longitudinally extending contiguous regions, wherein said first region is connected to said housing, and wherein said second region is configured to be at least partially implanted into a cochlea of the recipient to deliver stimulation to the cochlea in accordance with said one or more stimulation signals,

wherein said housing and said first region are configured such that following implantation of said second region into the cochlea, said housing is rotatable about an axis of said housing that is substantially aligned with a longitudinal axis of said first region, and such that said second region implanted in the cochlea remains substantially stationary during said rotation.

40. (New) The implantable component of claim 39, wherein said first and second regions each have substantially circular cross-sections, and wherein said housing is rotatable about an axis that is substantially aligned with a longitudinal axis of said first region that extends through the center of said first region.

41. (New) The implantable component of claim 39, wherein said housing comprises an edge that is most proximate the cochlea, and wherein first region is connected to said edge of said housing most proximate the cochlea.

42. (New) The implantable component of claim 39, wherein said housing comprises an edge that is most proximate the cochlea, and wherein said first region is connected to an edge of said housing that is adjacent said edge most proximate the cochlea.

43. (New) The implantable component of claim 39, wherein said housing is at least partially formed from a resiliently flexible material.

44. (New) The implantable component of claim 43, wherein a region adjacent one or more edges of said housing is resiliently deformable.

45. (New) The implantable component of claim 39, wherein said housing is substantially symmetrical about a plane that is parallel to said longitudinal axis of said first region.

46. (New) The implantable component of claim 39, wherein said housing is substantially symmetrical about a plane that is perpendicular to said longitudinal axis of said first region.

47. (New) The implantable component of claim 39, wherein said electronics configured to output one or more stimulation signals comprise a stimulator unit.

48. (New) The implantable component of claim 39, wherein said cochlear implant system comprises an external component, and wherein said implantable housing further comprises electronics configured to receive signals from said external component via a radio frequency link.

49. (New) The implantable component of claim 48, wherein said electronics configured to receive signals comprise a receiver coil positioned on said housing.

50. (New) The implantable component of claim 48, wherein said electronics configured to receive signals are further configured to allow transcutaneous bidirectional data transfer between said implantable component and said external component.

51. (New) The implantable component of claim 39, wherein said cochlear implant system further comprises an external component having a microphone configured to receive an input sound, and wherein said electronics comprise:

- a signal processor configured to convert the input sound into a coded signal; and
- a stimulator unit configured to convert said coded signal into said one or more stimulation signals.

52. (New) The implantable component of claim 39, wherein said implantable component further comprises a second electrode assembly having first and second longitudinally extending contiguous regions, wherein said first region of said second electrode assembly is connected to said housing, and wherein said second region of said second electrode assembly comprises one or more electrodes configured to be positioned in the recipient external to the cochlea.

53. (New) The implantable component of claim 52, wherein said first region of said first electrode assembly is connected to an edge of said housing, and wherein said first region of said second electrode assembly is connected to an edge of said housing opposing said first region of said first electrode assembly.

54. (New) The implantable component of claim 53, wherein a longitudinal axis of said first region of said second electrode assembly is substantially aligned with a longitudinal axis of said first region of said first electrode assembly.

55. (New) A cochlear implant system comprising:

an implantable component comprising:

an implantable housing having therein electronics configured to output one or more stimulation signals,

a receiver coiled attached to said housing,

a first electrode assembly having first and second longitudinally extending contiguous regions, wherein said first region is connected to said housing, and wherein said second region is configured to be at least partially implanted into a cochlea of the recipient; and

an external component having a transmitter coil configured to transmit signals from said external component to said receiver coil,

wherein said housing and said first region are configured such that following implantation of said second region into the cochlea, said housing is rotatable about an axis of said housing that is substantially aligned with a longitudinal axis of said first region, and such that said second region implanted in the cochlea remains substantially stationary during said rotation.

56. (New) The implantable component of claim 55, wherein said first and second regions each have substantially circular cross-sections, and wherein said housing is rotatable about an axis of said housing that is substantially aligned with a longitudinal axis of said first region that extends through the center of said first region.

57. (New) The implantable component of claim 55, wherein said housing comprises an edge that is most proximate the cochlea, and wherein first region is connected to said edge of said housing most proximate the cochlea.

58. (New) The implantable component of claim 55, wherein said housing comprises an edge that is most proximate the cochlea, and wherein said first region is connected to an edge of said housing that is adjacent said edge most proximate the cochlea.

59. (New) The implantable component of claim 55, wherein said housing is at least partially formed from a resiliently flexible material.

60. (New) The implantable component of claim 59, wherein a region adjacent one or more edges of said housing is resiliently deformable.

61. (New) The implantable component of claim 55, wherein said housing is substantially symmetrical about a plane that is parallel to said longitudinal axis of said first region.

62. (New) The implantable component of claim 55, wherein said housing is substantially symmetrical about a plane that is perpendicular to said longitudinal axis of said first region.

63. (New) The cochlear implant of claim 55, wherein said external component further comprises:

- a microphone configured to receive an input sound; and
- a signal processor configured to convert the input sound into a coded signal, wherein said transmitter coil is configured to transmit said coded signal to said receiver coil.

64. (New) The cochlear implant of claim 55, wherein said electronics further comprise a stimulator unit configured to output one or more stimulation signals based upon said coded signals, and wherein said second region of first electrode assembly is configured to deliver stimulation to the cochlea in accordance with said one or more stimulation signals.

65. (New) The cochlear implant of claim 55, wherein said receiver coil and said transmitter coil are further configured for transcutaneous bidirectional data transfer between said implantable component and said external component.

66. (New) The cochlear implant of claim 55, wherein said external component further comprises a microphone configured to receive an input sound, and wherein said implantable component further comprises:

a signal processor configured to convert the input sound into a coded signal; and
wherein said electronics are configured to convert said coded signal into said one or more stimulation signals, and wherein said first electrode assembly is configured to deliver stimulation to the cochlea in accordance with said one or more stimulation signals.

67. (New) The implantable component of claim 55, wherein said implantable component further comprises a second electrode assembly having first and second longitudinally extending contiguous regions, wherein said first region of said second electrode assembly is connected to said housing, and wherein said second region of said second electrode assembly comprises one or more electrodes configured to be positioned in the recipient external to the cochlea.

68. (New) The implantable component of claim 67, wherein said first region of said first electrode assembly is connected to an edge of said housing, and wherein said first region of said second electrode assembly is connected to an edge of said housing opposing said first region of said first electrode assembly.

69. (New) The implantable component of claim 68, wherein a longitudinal axis of said first region of said second electrode assembly is substantially aligned with a longitudinal axis of said first region of said first electrode assembly.

70. (New) A method of a rehabilitating the hearing of a recipient comprising:
implanting an electrode assembly having first and second regions into the recipient such that said second region is at least partially implanted into a cochlea of the recipient;
implanting a housing in said recipient, said housing having therein electronics configured to output one or more stimulation signals;
connecting said first region of said electrode assembly to said housing;
delivering stimulation to the cochlea via said second region of said electrode assembly in accordance with said one or more stimulation signals;
repositioning said housing about an axis of said housing that is substantially aligned with a longitudinal axis of said first region such that said second region implanted in the cochlea remains substantially stationary during said rotation.

71. (New) The method of claim 70, wherein repositioning said housing comprises:
accessing the site of implantation;
rotating said housing about said axis of said housing that is substantially aligned with said longitudinal axis of said first region; and
closing the site of implantation.

72. (New) The method of claim 71, wherein said first and second regions each have substantially circular cross-sections, and wherein said rotating said housing comprises:
rotating said housing about an axis of said housing that is substantially aligned with a longitudinal axis that extends through the center of said first region.

73. (New) The method of claim 71, wherein said housing is at least partially formed from a resiliently flexible material, and wherein rotating said housing further comprises:
deforming said housing to permit said rotation.